

DRAFT

NOT FOR ENTRY

Amendments to the Specification

Please delete the paragraph bridging pages 4 and 5 of the specification and substitute the following paragraph in place thereof.

In its simplest form, therefore, the present invention is based on the conversion of a chemical (e.g. quinazolinones, benzoxazoles, benzimidazoles, benzothiazoles, indoles, and derivatives thereof) from a freely water-soluble form to a highly water-insoluble form and hence in vivo precipitation at the specific site where an enzyme (e.g., one of acetylglucosaminidases, acetylneuraminidases, aldolases, amidotranferases, arabinopyranosidases, carboxykinases, cellulases, deaminases, decarboxylases, dehydratases, ~~dehydrogenase, dehydrogenases~~, DNAses, endonucleases, epimerases, esterases, exonucleases, fucosidases, galactosidases, glucokinases, glucosidases, glutaminases, glutathionases, guanidinobenzodases, glucoronidases, hexokinases, iduronidases, kinases, lactases, ~~manosidases~~, mannosidases, nitrophenylphosphatases, peptidases, peroxidases, phosphatases, phosphotransferases, proteases, reductases, RNAses, sulfatases, telomerases, transaminases, transcarbamylases, transferases, xylosidases, uricases, ~~urokinasess~~ or urokinases) or any other species capable of carrying out such a conversion in high concentrations. Pretargeting of enzyme or its equivalent species may be achieved by making use of specific antibodies or any such specific receptor-binding ligand to the desired sites in vivo. Note that the ligand may also be a peptide or hormone, with the receptor specific to the peptide or hormone. Alternatively, the enzyme may be produced within the tumor site by the tumor cells themselves or following gene therapy or similar means. The chemical to be injected in the second step contains any nuclide suitable for imaging and/or therapy (e.g. Boron-10, Carbon-11, Nitrogen 13, Oxygen-15, Fluorine-18, Phosphorous-32, Phosphorous-33, Technetium-99m, Indium-111, Yttrium-90, Iodine-123, Iodine-124, Iodine-131, Astatine-211, Bismuth-212, etc.).